No. 7700028

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Arkansas Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Rex 713'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* February *in the year of our Lord one thousand nine hundred and* eighty.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

FORM GR-470
(1-76)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
New Rex	per letter 3/3/78 New Rex 713	PV NUMBER 7700028

2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE	TIME
Cotton	Gossypium hirsutum L.	1-24-77	8:45 A.M. P.M.
4. FAMILY NAME (BOTANICAL)	**5. DATE OF DETERMINATION**	**FEE RECEIVED**	**DATE**
Malvaceae	1971	$ 250.00 $ 250.00 $	1-24-77 3-24-77

6. NAME OF APPLICANT(S)	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	8. TELEPHONE AREA CODE AND NUMBER
Arkansas Agricultural Experiment Station	University of Arkansas Fayetteville, Arkansas 72701	501-575-4446

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
State Experiment Station		

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Dr. L. O. Warren, Director
Arkansas Agricultural Experiment Station
University of Arkansas
Fayetteville, Arkansas 72701

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations?	14C. If "Yes," to 14B, how many generations of production beyond breeder seed?
[ ] YES [X] NO	[ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal? [X] YES [ ] NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

Jan. 18, 1977 (DATE) — L. O. Warren (SIGNATURE OF APPLICANT)

1

(DATE) — (SIGNATURE OF APPLICANT)

Exhibit A

Origin and Breeding History of the Variety

per letter 3/3/78 713
998

~~New~~ Rex originated in 1970 as a single plant selection made by C. A. Moosberg, an employee of the Arkansas Agricultural Experiment Station, in an open-pollinated population of the Rex SL-66 variety grown at Marianna, Arkansas. A winter increase of self-pollinated seed was obtained at Iguala, Mexico, and planted in preliminary yield trials at Marianna in 1971. The decision to increase and field test the selection, labeled Arkansas 70-13, was made in the summer of 1971.

Winter increases from the 1971 planting were repeated at Iguala and planted in small but isolated increases at Marianna in 1972. A few off-type plants were found and removed in 1972 by B. A. Waddle, also an employee of the Arkansas Agricultural Experiment Station who was substituting for C. A. Moosberg who had resigned. Larger winter increases were obtained at Iguala and a block increase was planted at Marianna in 1973. Responsibility for roguing and other purity maintenance functions in 1974 and subsequent years was assumed by C. Wayne Smith, an employee of the Arkansas Agricultural Experiment Station.

The original plant was selected for a potential advance in earliness of maturity while retaining the other characteristics of the parental Rex variety. Subsequent tests confirmed this advance.

The Arkansas Agricultural Experiment Station named and released the selection as New Rex in the summer of 1976. It is a stable genotype.

Exhibit A Supplement

As per February 23, 1977 letter

Individual plant selections made in the Breeding Seed Block in 1974 by C. Wayne Smith revealed no measurable genetic variation in ~~New~~ Rex 7/3 1. It was concluded that off-type plants found in 1972 were the result of mechanical mixtures. ~~New~~ Rex 7/3 1, therefore, is genetically stable with no recurring off-types.

Supplement to special report dated 9/26-79

Reference; Cotton Variety Protection No.

77000 28 for 'Rex 713'

In the September 26 report, data were presented to show that Rex 713 bloomed earlier than Rex SL-66 and this difference was significant at the 10% level of probability. Since the only novelty claim for Rex 713 as differing from Rex SL-66 was earliness, it was felt that the flowering data were adequate support for the novelty claim. Additional data were submitted to relate the earliness advance to harvest.

This supplement responds to the October 25 request that we show an additional measurement of earliness not tied to yield.

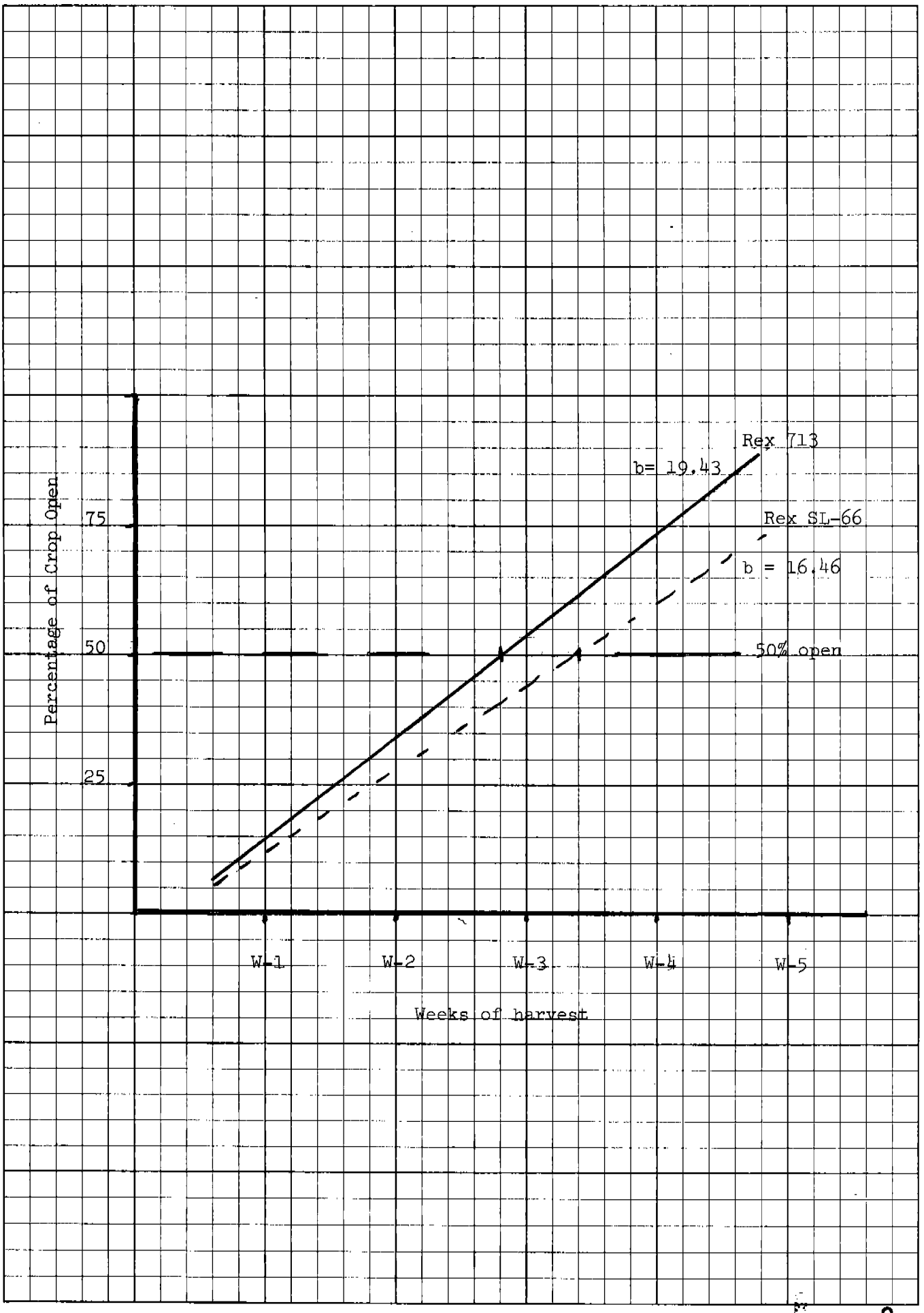
The sequential harvests separated by equal time increments permits a comparison of rates of opening for the two cultivars. Such a rate comparison is independent of yield. This statistical exercise has been completed with the following summary from Marianna:

Sources of variation	df	M. Sq	F	P
Replications	1	42.7213		
Harvests	4	4,601.2205		
R X H Interaction	4	15.1488		
Cultivars	2	600.1693		
(1) Rex 713 vs Rex SL-66	1	371.5200		
Cultivar X Harvest	8	41.3585		
(1) X H_L	1	100.4735**	10.92	.01
Pure Error (CXRXH)	8	9.1948		

Rex 713, "b" = 19.43 ; Rex SL-66 "b" = 16.46, a highly significant contrast.

These slope differentials are shown in the attending graph. The significantly larger "b" value for Rex 713 is hereby submitted in support of the earliness claim for novelty of Rex 713 in contrast to Rex SL-66.

B. A. Waddle
Professor and Altheimer
Chair for Cotton Research


Rex 713
b= 19.43
Rex SL-66
b = 16.46
50% open
Percentage of Crop Open
75
50
25
W-1
W-2
W-3
W-4
W-5
Weeks of harvest

Special report of research designed to reveal novelty differences between 'Rex 713' and 'Rex SL-66' if such differences exist.

Reference: Cotton Variety Protection Application No. 7700028 for 'Rex 713'

Breeders seed of 'Rex 713' and 'Rex SL-66' in 1978 were planted, along with 16 other entries, in replicated tests, each designated as an Early Season Strains test, on each of the four Branch Experiment Stations that have cotton production capabilities. All plantings were made May 15-19, 1978.

Data recorded were (1) days to first bloom (the date when at least a third of the plants have bloomed), (2) Rate of maturity with weekly harvests (at the Marianna location only), (3) maturity index expressed as percentage of total crop harvested when picked the first time. These data are summarized in the attached tables except for the Marianna bloom data which were lost after being recorded.

The primary novelty claimed for Rex 713 against its most similar cultivar, Rex SL-66, is that of being earlier in maturity. Weekly harvest data from Marianna are shown in Table 1. Percentages of total harvested at weekly intervals are shown in Table 2. Rex 713 was earlier than Rex SL-66 at each harvest date, significantly so for the third, fourth, and fifth harvests. This differential is shown graphically in Figure 1. Maturity Indices, expressed as percentages of totals that were harvested at first picking are shown in Table 3. Although variable dates of first harvest are shown, there was no Cultivar X Location interaction. As shown, Rex 713 was significantly earlier than Rex SL-66. Bloom data are shown in Table 4. The three cultivars used in this special analysis differed significantly and Rex 713 was earlier than Rex SL-66 at the 10% level of probability.

In summary, the extensive data collected in 1978 clearly support the novelty claim of Rex 713 as being earlier than Rex SL-66.

B.A. Waddle
Professor and Altheimer Chair
for Cotton Research

B.A. Waddle
9/26/79

Table 1. Successive harvests at weekly intervals, beginning two weeks after first open ball in Rex 713 at Marianna for Rex 713, Rex SL-66, and Stoneville 213 cultivars, in grams per plot.

	Successive harvests					
Cultivars	1st	2nd	3rd	4th	5th	6th
	gms	gms	gms	gms	gms	gms
Rex 713	1,627	3,894	3,097	2,890	1,907	2,270
Rex SL-66	976	3,713	1,881	1,403	2,815	2,951
Stoneville 213	46	3,700	2,040	408	3,496	3,814

Table 2. Cumulative percentage of total harvest as harvested at weekly intervals, beginning two weeks after first open ball in Rex 713 at Marianna for Rex 713, Rex SL-66, and Stoneville 213.

	Successive harvests					
Cultivars	1st	2nd	3rd	4th	5th	6th
	%	%	%	%	%	%
Rex 713	10.3	35.2	56.8*	75.3*	87.4*	100
Rex SL-66	6.9	33.6	46.9	56.8	77.6	100
Stoneville 213	0.3	27.4	42.8	45.7	71.6	100

LSD_{05} for Cultivar means within a harvest = 6.9%

* Rex 713 differs significantly from Rex SL-66.

Table 3. Earliness of maturity in 1978 as represented by percentage of total crop harvested[1/] at first picking at four Arkansas locations (south to north, left to right).

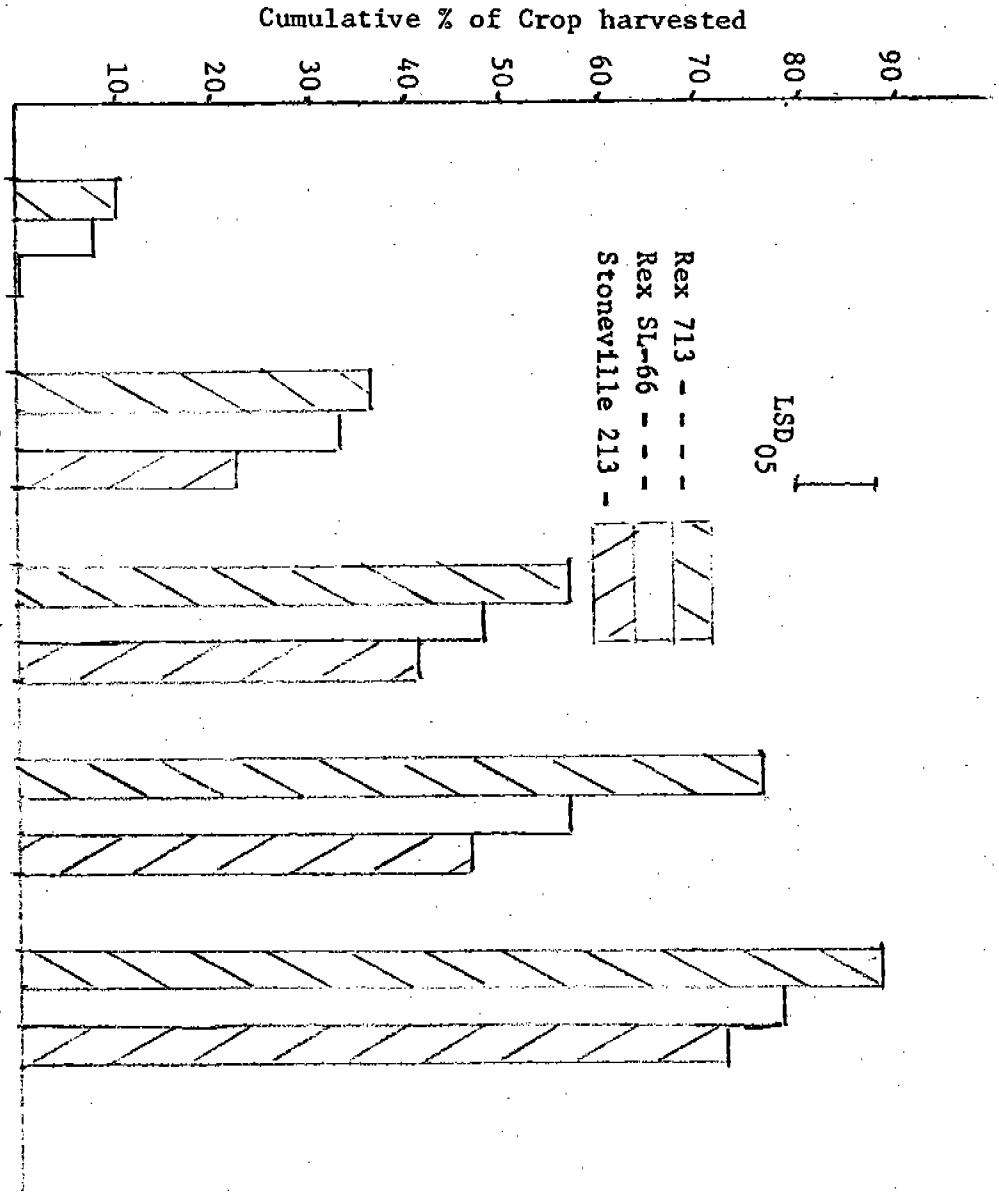
	Location				
Cultivar	Rohwer S.E.B.S.	Marianna C.B.S.	Clarkedale D.B.S.	Keiser N.E.B.S.	Mean
	%	%	%	%	%
Rex 713	49.0	56.8	29.4	39.6	43.7
Rex SL-66	42.6	46.9	21.0	32.4	35.7
Stoneville 213	35.2	42.8	15.0	14.9	32.6
Cultivar X Location Interaction non-significant					
LSD_{05} Cultivar means					6.3

[1/] Dates of 1st harvest:

Rohwer, September 13-14
Marianna, September 20
Clarkedale, September 21
Keiser, October 5

Table 4. Days from planting to the time when one third of the plants have bloomed for cultivars grown at three locations, Arkansas, 1978. (Note: data recorded at Marianna were lost in transit).

	Location			
Cultivar	Rohwer S.E.B.S.	Clarkedale D.B.S.	Keiser N.E.B.S.	Cultivar Means
	No.	No.	No.	No.
Rex 713	55.0	54.5	63.0	57.5
Rex SL-66	55.0	56.0	65.0	58.7
Stoneville 213	55.5	56.5	67.0	59.7
Cultivar X Location Interaction non-significant				
LSD_{05} Cultivar Means (Difference between Rex 713 and Rex SL-66 significant at the 10% probability level).				1.3


Cumulative % of Crop harvested
10
20
30
40
50
60
70
80
90
Rex 713 - - - -
Rex SL-66 - - -
Stoneville 213 -
LSD05
2
3
4
5
6
Weeks after 1st open ball in Rex 713
Marianna, 1978

7700028

Exhibit B

Novelty Statement

per letter 3/3/78 DJH

~~New~~ Rex [is similar in appearance to] Rex SL-66 (see attached release publication) except that it is earlier in maturity, has a more uniform plant type and has smaller leaves and bolls.

Performance Data

1. 1973 New Strains Test, Seedcotton Yield per Acre (Ark. Agri. Expt. Sta. Mimeo Series #222)

Entry	Rohwer 1st Harvest*	Rohwer Total	Clarkedale 1st Harvest**	Clarkedale Total
	lbs.	lbs.	lbs.	lbs.
New Rex	1,480	2,670	2,120	2,370
Rex SL 66	1,140	2,410	1,710	1,980
Deltapine 16	1,100	3,270	1,700	2,220
LSD 05	(310)	(410)	(390)	(410)

*1st harvest made September 25, 1973
**1st harvest made October 18, 1973

2. 1974 New Strains Test, Rohwer (Ark. Agri. Expt. Sta. Mimeo #232)

Entry	Agronomic Properties: Total Yield* Lint/Acre	Lint %	Boll Size	Fiber Properties: Strength P.S.I.x10^3	Length 2.5%SK	Mike Units
	lbs.	%	gm	lbs.	inches	no.
New Rex	812	37.6	5.53	89.3	1.16	4.6
Rex SL 66	838	39.0	6.48	86.7	1.14	4.7
Deltapine 16 (ck)	865	39.7	5.63	88.7	1.15	5.1
LSD 05	(110)	(1.9)	(0.60)	(4.3)	(0.04)	(0.5)

*Only one harvest made

3a. 1975 New Strains Test, Rohwer (Unpublished)

Entry	Agronomic Properties: Total Yield* Lint/Acre	Lint %	Boll Size	Fiber Properties: Strength P.S.I.x10^3	Length 2.5%SK	Mike Units
	lbs.	%	gm	lbs.	inches	no.
New Rex	730	33.0	5.6	81.7	1.13	3.7
Rex SL 66	666	32.9	5.2	81.7	1.18	3.5
Stoneville 213 (ck)	675	33.5	5.2	82.0	1.13	4.1
LSD 05	(185)	(3.1)	(0.8)	(4.0)	(0.05)	(0.5)

* Only one harvest made

3b. 1975 New Strains Test, Marianna (Unpublished)

Entry	Agronomic Properties: Total Yield* Lint/Acre	Agronomic Properties: Lint %	Agronomic Properties: Boll Size	Fiber Properties 1/: Strength P.S.I.x10^3	Fiber Properties 1/: Length 2.5%SK	Fiber Properties 1/: Mike Units
	lbs.	%	gm	lbs.	inches	no.
New Rex	1,130	35.4	5.3			
Rex SL 66	827	37.3	6.8			
Stoneville 213 (ck)	965	39.1	5.3			
LSD 05	330	3.4	0.9			

* Only one harvest made

1/ Fiber properties not determined for Marianna in 1975

DEPARTMENT OF AGRONOMY
115 Plant Science Building
(501) 575-2355
Fayetteville, Arkansas 72701

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE
College of Agriculture and Home Economics · Agricultural Experiment Station

December 5, 1977

M E M O R A N D U M

TO: Director L. O. Warren, Arkansas Agricultural Experiment Station

FROM: B. A. Waddle, Professor and Altheimer Chair for Cotton Research

SUBJECT: The Higgins letter of November 9, 1977, concerning our patent application for New Rex Cotton.

Consider first the name, New Rex. Our original Rex was released in the summer of 1957 and was replaced by Rex Smoothleaf in the summer of 1963. This new cultivar, in turn was replaced by Rex Smoothleaf 66 in the summer of 1968. In 1974, we terminated Rex Smoothleaf 66. Arkansas' unique system of germ plasm control makes it impossible for sequential cultivar releases to overlap. In this sense, New Rex could not become misleading at some unknown future date. In this context, "New Rex" is no more vulnerable than awarded certificate #71000 95, "Super 59", or #7100101, "Early Market".

Higgins' second point, that of identifying at least one difference between New Rex and each of 11 "varieties", gives us a problem. Only two of these eleven have been tested in Arkansas and neither of these were in the same test as New Rex. The examiner's office has access to information that we do not have. If they will send us their descriptions of each of the eleven, we could give one difference between New Rex and each of the eleven. In the meantime, I have searched data from states other than Arkansas and have derived the following contrasts:

"Variety"	New Rex differs by this contrast
Dunn 224	Lower strength, T-0 gauge, MPSI
McNair 7210	Lower strength, T-0 gauge, MPSI
McNair 211	(No data found)
Pee Dee 2165	Lower strength, T-0 gauge, MPSI
Tamcot CAMD-E	Longer staple (2.5% Skan)
Deltapine 137	(No data found)
Pee Dee 0113	Lower strength, T-0 gauge, MPSI
Deltapine 5826	Shorter staple (1967)
Stoneville 817	Larger bolls (1969)
Coker 8103	Shorter staple
Lewis 74C	Larger bolls

You will note that I have been unable to find any data on McNair 211 or Deltapine 137.

Higgins' third point, that concerning mean length and Uniformity ratio is a puzzle. My records show that we submitted a mean length value of 0.56 and a Uniformity ratio of "49". These are correct values. Our mean length is approximated by the 50% skan length (0.53) as estimated by the "Fibrograph" instrument. This length estimate approximates the mean length of all fibers. Our uniformity estimate is the ratio of mean length to upper half mean lengths or 0.56 to 1.14, giving an estimate of 49. These are standard tests as used in cotton. For this reason, the Higgins comments are puzzling.

Higgins' fourth point, that of evidence supporting the statement that New Rex is earlier than Rex Smoothleaf 66, raises the question of how much data is wanted. The 1973 data are averages of two separate tests at each of two locations. Are details greater than this needed? We repeated one test at each location in 1974 but made two harvests only at one location with these results:

Strain	Total Yield CWT SC/Acre	% 1st harvest on September 20
Ark. 70-13 (New Rex)	21.6	82
Rex SL-66	21.5	68
Deltapine 16	21.8	66
Stoneville 213	24.6	58
LSD_{05}	(2.9)	(7)

No additional tests comparing New Rex and Rex SL-66 were made after 1974.

Higgins' last points of concern were the contrast of Rex Smoothleaf and Rex Smoothleaf 66 and the contrast of Rex Smoothleaf and New Rex. Our attachment to Exhibit B as originally submitted indicated that Rex Smoothleaf 66 differed from our original Rex Smoothleaf by having fibers 1/32- to 1/16-inch longer and sufficiently stronger to give a 8-10 percent advance in yarn strength. No other differences were cited. All other characteristics were correctly inferred as being similar, i.e. both possess some tolerance to the Fusarium-Nematode complex, both are susceptible to Verticillium Wilt but their earliness gives them an escape potential, both are resistant to Race 1 of Bacterial Blight and have not been tested by us for resistances for other races of Bacterial Blight since they are not found generally in Arkansas, both have the same maturity, etc.

DEPARTMENT OF AGRONOMY
110 Agriculture Building
(501) 575-2355
Fayetteville, Arkansas 72701

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE
College of Agriculture and Home Economics · Agricultural Experiment Station

March 3, 1978

Dr. Joseph J. Higgins, Examiner
Plant Variety Protection Office
Grain and Seed Division
National Agricultural Library
Beltsville, Maryland 20705

Dear Dr. Higgins:

Re: Cotton application No. 700028

In the novelty statment attached to application No. 700028 as Exhibit B we state that 'New Rex' is earlier in maturity, has a more uniform plant type and has smaller leaves and bolls than 'Rex SL 66'. During my visit with you February 17, 1978, we confirmed the earlier maturity, struck out the plant type uniformity, and agreed that I should provide more data on the boll size differential claimed. Our original Exhibit B included one set of data that supported our claim and one that was in conflict.

The two cottons, 'Rex SL 66' and 'New Rex', were included in strain tests in 1973, 1974, and 1975 at several Arkansas locations. In addition to the comparative data in the two tests included in our original Exhibit B, these have been compiled:

1973 Rohwer Tests

	Single drill gms per boll	Twin drill gms per boll
1st harvest		
'Rex SL 66'	6.28	6.00
'New Rex'	7.04	6.01
LSD_{05}	0.70	0.76
2nd harvest		
'Rex SL 66'	5.72	6.68
'New Rex'	6.99	5.59
LSD_{05}	0.53	0.37

16

Poor seed germination of 'New Rex' gave poor stands in 1973, especially in the single drill test.

1974 Clarkedale Test

	gms per boll
'Rex SL 66'	6.3
'New Rex'	6.2
LSD_{05}	0.43

1975	Clarkedale	Marianna	Rohwer
	gms/boll	gms/boll	gms/boll
'Rex SL 66'	6.48	6.85	5.20
'New Rex'	5.27	6.67	5.56
LSD_{05}	0.88	n.s.	0.85

These are all the comparable data we have. I do not believe we can claim smaller bolls as a novelty component. What appears to be spurious differences in these tests may be nothing more than a reflection of the frequency of the aberrant tall plants having big bolls known to exist as a contaminant of 'Rex SL 66'. Outside of these aberrant plants, there are probably no genetic differences in boll size between the two cottons.

This leaves us with the earliness claim for novelty and this recurs as a firm difference. Is this enough?

You may or may not know of our name problem. When we finally were able to contact Mr. Clyde Edwards of the Seed Branch, he held to his request of a name change from 'New Rex'. His position was logical. We have asked that our application be amended with the name change from 'New Rex' to 'Rex 713'. Our experimental number for this cotton was 'Arkansas 70-13'. The 713 suffix was acceptable by Mr. Edwards.

It is my hope that this letter can allow Application 700028 to clear the Examiner's desk. If other data are desired, I will attempt to provide them.

Sincerely yours,

B. A. Waddle

B. A. Waddle, Professor and
Altheimer Chair for Cotton Research

BAW:cds

c.c. Director L. O. Warren

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8 (10-2-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C (Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Arkansas Agricultural Experiment Station

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

University of Arkansas
Fayetteville, Arkansas 72701

FOR OFFICIAL USE ONLY

PVPO NUMBER 7700028

VARIETY NAME OR TEMPORARY DESIGNATION ~~NEWAR~~ REX 713

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. SPECIES:

[1] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

[0] EASTERN [2] DELTA [2] CENTRAL [0] HIGH PLAINS [0] EL PASO AREA

[0] WESTERN LOW HOT VALLEYS [0] SAN JOAQUIN [0] OTHER (Specify) _____

3. MATURITY (50% Open Boll):

[1][2] NO. OF DAYS *EARLIER* THAN ..... [2]

[ ][0] NO. OF DAYS *LATER* THAN ..... [4]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (Specify) _____

4. PLANT HABIT:

[2] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[3] 1 = FOLIAGE SPARSE 2 = DENSE 3 = OTHER (Specify) Intermediate

5. PLANT HEIGHT:

[3][0] CM. *SHORTER* THAN ..... [2]

[ ][0] CM. *TALLER* THAN ..... [4]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (Specify) _____

6. MAIN STEM:

[3] 1 = LAX 2 = ASCENDING 3 = ERECT

[1][2] CM. TO FIRST FRUITING BRANCH

[0][7] NO. OF NODES TO FIRST FRUITING BRANC (*from cotyledonary node*)

7. LEAF:

[1][4] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[2] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH) 2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER (Specify) _____

9. LEAF COLOR:

[2] 1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (*Acala-442*) 4 = RED
5 = OTHER (Specify) _____

10. LEAF TYPE:

[1] 1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (Specify) _____

11. FLOWER:

[2] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW [1] Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

[3] 1 = CLUSTER 2 = SHORT 3 = NORMAL [1] 1 = DETERMINATE 2 = INDETERMINATE

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13. GOSSYPOL CONDITION:

[3] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER (Specify) _____

[1] 1 = NORMAL BUD GOSSYPOL 2 = HIGH BUD GOSSYPOL

14. SEEDS:

[1][1][4] ± [1][0] SEED INDEX (*Fuzzy seed basis*)

[2] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 3 = HEAVY (ACALA SJ-1) 4 = OTHER (Specify) _____

Rex Smoothleaf 66, A Superior Cotton

By CARL A. MOOSBERG

REX SMOOTHLEAF 66 results from the selection of superior plants within Rex Smoothleaf. Both Fusarium and Verticillium wilt have been isolated from plants grown in the increase fields. The first foundation seed of Rex Smoothleaf 66 was produced in 1966.

The breeding procedure has been as follows. A part of the 1963 nucleus seed was planted in the breeding block on the Cotton Branch Experiment Station, Marianna. Early in the season the plants were inoculated with bacterial blight and susceptible plants were eliminated. When the crop was mature self-pollinated seed was saved from plants with a well matured boll load; plants with symptoms of disease infection and low yield were discarded. Selfed seed from these selected plants was bulked and formed the nucleus for 1964 when part of the seed was planted in the breeding block and treated as in 1963. This selection process was repeated in 1965.

When properly cured, seed of Rex Smoothleaf 66 produces strong, vigorous seedlings. The seed coat seems thick and tough, and apparently resists cracking and separation of the seed coat from the embryo during machine harvesting and processing. This objectionable condition was common in some varieties during the past two years.

Seed of Rex Smoothleaf 66 were entered in the Regional Fusarium Wilt Screening Test at Tallassee, Alabama, in 1967. Good tolerance to wilt was shown in comparison to the susceptible check variety.

The bolls have good storm tolerance and the locks remain in the bur through periods of inclement weather. Machine-harvested seedcotton is easily cleaned in the gin plant and less heat is required to obtain satisfactory grades than is necessary with varieties having fuzzy leaves.

The fiber is 1/32- to 1/16-inch longer than the original Rex Smoothleaf release, and produces yarns that are 8 to 10 percent stronger. An analysis of fiber properties is given in Table 1.

In a 1967 comparison Rex Smoothleaf 66 was as early as the original 1963 nucleus. The bolls of Smoothleaf 66 were larger and more compact.

High quality fiber was produced in 1966 and 1967, even though adverse weather conditions coupled with a killing freeze early in November of both years made normal production difficult. In 1966, 31 acres were planted on May 20 to produce breeder seed and in 1967 the same field was planted on May 17.

The mean yield in 1966 was 628 pounds of high quality lint per acre, in comparison to the Lee County average yield of 480 pounds. The climatic conditions were even worse in 1967, with the yield on the 31 acres amounting to 542 pounds per acre. Results of a frozen boll survey indicated that 30 to 35 percent of the crop was destroyed by freeze. Results of small-scale yield trials are shown in Table 2.

It will be noted in Table 3 that a little more than half of the first pick in 1967 graded LM; the field was machine picked while less than 50 percent of the bolls were open in some areas. Defoliant was less effective in these areas where the bolls were slow to open.

Table 1. Fiber Properties and Yarn Strength[1] of Rex Smoothleaf 66 Nucleus and Breeder Seed, and Stoneville 213, 1966

Measure	Rex Smoothleaf 66		Stoneville 213
	Nucleus	Breeder	
Length (Fibrograph)			
50% (inches)	0.56	0.53	0.53
2.5% (inches)	1.19	1.17	1.14
Uniformity index	46	47	46
Fineness (micronaire)	4.1	4.4	4.3
Color and brilliance			
Rd	78	78	79
b	7.8	8.0	7.5
Yarn strength 27 Tex (lb.)	128	129	122
Strength and elongation (Stelometer)			
T_1	18.43	18.20	17.78
E_1	7.96	7.49	9.18

[1]Tests made by U. S. Dept. Agr. Crops Research Spinning Laboratory, Knoxville, Tenn.

Table 2. Yield of Seed and Lint of Rex Smoothleaf 66 Nucleus and Breeder Seed, and Stoneville 213 Check, 1965 to 1967[1]

Year	Rex Smoothleaf 66				Stoneville 213	
	Nucleus		Breeder			
	Seed	Lint	Seed	Lint	Seed	Lint
	Pounds per acre					
1965	1,948	1,069	1,773	980	1,580	972
1966	1,680	911	1,623	879	1,749	992
1967	1,176	629	1,172	589	1,056	607
Mean	1,601	870	1,523	816	1,462	857

[1]Yields in 1966 and 1967 represent seedcotton produced and matured before killing freeze that occurred early in November of each year.

Table 3. Grade, Staple, Fineness, and Other Properties of Rex Smoothleaf 66 as Produced on a 31-Acre Field in 1966 and 1967, Marianna

Year	No. bales	Grade distribution			Staple length, av. in 32nds[1]	UHM[2]	Micronaire av.[1]	Strength P.S.I.[2] 1,000 lb.
		SLM	SLM Lt. sp.	LM				
1966	38	33	4	1	34	1.11	4.6	86.4
1967								
1st pick	23	10	0	13	35	1.14	4.0	83.2
2nd pick	13	7	6	0	34	—	3.2	—

[1]As determined by U. S. Dept. Agr. Consumer and Marketing Service, Little Rock, Ark.
[2]As determined by United States Testing Co., Inc., Memphis, Tenn.

Mr. Moosberg is a research associate in agronomy, located at the Cotton Branch Station, Marianna.

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New Rex, A New Cotton for Arkansas

By C. WAYNE SMITH and B. A. WADDLE

THIS STATION recently released a new cultivar of cotton (*Gossypium hirsutum* L.) for production in Eastern Arkansas. The new cotton, tested under the experimental designation of Arkansas 70-13, has been named NEW REX.

Arkansas 70-13 originated in 1970 as a single plant selection made by C. A. Moosberg in an open-pollinated population of Rex SL-66. The plant was selected for the fruiting characteristics of the original Rex cultivar as released in 1957 (Ark. Farm Res. Vol. VI, No. 3, 1957), and subsequent generations have been propagated to maintain these characteristics.

The consistent and superior performance of Arkansas 70-13 in four years of testing warrants its release as a new cotton under the name NEW REX.

New Rex is similar in appearance to the original Rex except that it has less foliar pubescence. It is earlier maturing, more uniform in development, and has slightly smaller bolls and seeds than the parent cultivar. The plants are compact, have short internodes with the first fruiting branch generally emerging at the seventh node, have a faster initial rate of squaring than Deltapine 16 or Rex SL-66, and respond well to defoliants. The early maturity of New Rex provides an escape mechanism that keeps losses to Verticillium wilt at a minimum.

Lint yields of New Rex are competitive with yields of standard Delta cotton cultivars. In 1974, when September was characterized by cool, rainy weather, this cotton was the only entry in the Commercial Cotton Cultivar test at the Northeast Branch Station near Keiser to mature enough bolls for picker harvest.

In 1974 and 1975, New Rex did not differ significantly in total yield from Deltapine 16, Stoneville 213, or Coker 310 in 6 of the 7 Commercial Cotton Cultivar tests harvested (Table 1). Also, New Rex did not significantly differ in yield from Rex SL-66, Stoneville 213, or Coker 310 in the New Strains Tests at 3 locations across Arkansas in 1975 (Table 2).

Dr. Smith is assistant agronomist, located at the Cotton Branch Station, Marianna; Dr. Waddle is agronomist.

New Rex fiber is of acceptable quality to compete with the cotton cultivars now being grown in Arkansas. Its fiber has breaking strength in the Deltapine 16 and Stoneville 213 range (85 to 90 thousand pounds per square inch), a 2.5% span length which approximates the Classer's Staple (slightly over 1 1/8 inches), good uniformity in length of fibers, and fineness or "mike" in the premium range. Gin turnout or lint percentage is low but acceptable (Table 3).

Seed of New Rex are being increased in 1976 by Wilson Seed Company at Wilson, Ark., and should be commercially available for the 1978 planting season. However, limited quantities of seed will be available for grower trials in the 1977 planting season. The Cotton Branch Station, Marianna, maintains all rights and responsibilities for breeder seed production and maintenance of this cultivar.

COVER PICTURE

In the picture on the cover, T. J. Ashley is standing in a planting of New Rex at the Cotton Branch Station. The row on the right is a standard cotton variety now being grown in the Delta.

Table 1. Lint Yields of New Rex, Compared to Standard Delta Cultivars, at 5 Test Locations, 1974 and 1975

Cultivar	Rohwer	Marianna		Clarkedale,	Keiser,	Manila	
	1975	1974	1975	1975	1975	1974	1975
	Lint yield, pounds per acre						
New Rex	680	786	976	1312	695	511	447
Brycot 4	571	953	877	1084	677	392	381
Coker 310	624	938	990	1246	755	511	333
Deltapine 16	604	1058	1059	1538	838	402	439
Stoneville 213	724	950	1055	1462	842	495	388
LSD, .05[1]	111	177	121	345	172	148	146

[1]In any column, two yields are significantly different if they differ by more than the LSD value.

Table 2. Lint Yields of New Rex, Compared to Standard Cultivars, at 3 Test Locations in 1975 Arkansas New Strains Tests

Cultivar	Rohwer	Marianna	Clarkedale
	Lint yields, pounds per acre		
New Rex	730	1130	760
Coker 310	650	1004	461
Stoneville 213	675	965	427
Rex SL-66	660	827	582
LSD, .05[1]	185	330	n.s.

[1]In any column, two yields are significantly different if they differ by more than the LSD value.

Table 3. Fiber Properties of New Rex Compared with Standard Delta Cultivars in Arkansas, 1974 and 1975[1]

Cultivar	Strength, P.S.I. x 10^3	Length, 2.5 % sk	Uniformity	Mike	Gin turnout
	Pounds	Inches	Indices	Units	%
New Rex	83.3	1.14	45.9	4.3	35.3
Brycot 4	91.1	1.14	46.4	4.8	37.4
Coker 310	88.7	1.17	47.1	4.6	37.2
Deltapine 16	83.1	1.17	47.9	4.7	37.9
Stoneville 213	85.5	1.14	46.6	4.8	37.6

[1]Each value represents the average of at least 5 and not more than 12 location-test-years.

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Muscadine Grapes in East-Central Arkansas

By J. N. MOORE and H. L. BOWDEN

THE MUSCADINE grape (*Vitis rotundifolia* Michx) is indigenous to southern, central, and eastern Arkansas. Considerable quantities of fruit are harvested from wild plants each year and used fresh or for juice, jellies, sauces, pies, and wine. The development of superior varieties has stimulated interest in making home garden and commercial plantings.

A replicated test planting of 20 commercial varieties was established at the Strawberry Substation, Bald Knob, in the spring of 1967. A 2-wire horizontal trellis was used. The plants first fruited in 1969. Data on yields, fruit size, and fruiting characteristics were taken each year.

Data on yield, fruit size, harvest date, fruit color, and flower type are given in the table. Yields in 1975 were from mature plants, while the 7-year mean yields include production in early years when the plants were small. The most productive varieties were Higgins, James, Creek, and Magnolia. Most varieties were moderately productive, but Pamlico, Dearing, Burgaw, Yuga, Tarheel, and Willard were low in yield throughout the test period.

Higgins consistently produced the largest fruit of all varieties. Other varieties with good fruit size were James, Pamlico, Albemarle, Topsail, Magnolia, and Roanoke. Tarheel, Creek, Dearing, Magoon, and Yuga produced small fruit.

Early-ripening varieties were Hunt, Duplin, Chowan, Tarheel, Roanoke, and Albemarle. Creek, Yuga, Higgins, and Dearing were late in ripening.

At maturity the fruit of some varieties tends to abscise, or shatter, from the plant. This may result in some loss of fruit before harvest. Pamlico, Chowan, Scuppernong, Tarheel, and Magnolia are subject to shattering. In contrast, some varieties that do not abscise readily upon maturity are difficult to harvest by shaking. Thomas, James, and Duplin are hard to harvest.

Some varieties have a tendency to ripen unevenly, requiring several individual harvests. Varieties showing this trait were Pamlico, Higgins, and Yuga.

Muscadines are more resistant to disease than are bunch grapes. However, powdery mildew and black rot may occasionally result in damage. Among the more disease-tolerant varieties are Creek, Hunt, Thomas, Roanoke, and James. Powdery mildew has been observed to produce losses occasionally on Duplin, Magnolia, Tarheel, and Willard.

Some muscadine varieties that produce only pistillate flowers must be interplanted with perfect-flowered varieties for pollination. The data on flower type in the table will help in making selections.

Considering all fruit and plant characteristics, the most promising varieties in this test were:

Black, pistillate: James, Creek, Thomas, Hunt
Black, perfect: Duplin, Magoon, Albemarle
Bronze, pistillate: Higgins
Bronze, perfect: Magnolia, Roanoke

Several new varieties have been introduced recently from breeding programs in southeastern United States. New trials are planned to determine their adaptation and performance under Arkansas conditions.

Yields, Fruit Size, Harvest Date, Fruit Color, and Flower Type of 20 Muscadine Grape Varieties at Bald Knob, 1969-75[1]

Variety	Yield		Fruit size		Av. harvest date	Fruit color	Flower type
	1975	7-yr mean	1975	7-yr mean			
	Pounds per plant		Grams per berry		7 years		
Higgins	114.3a	68.6a	5.8a	6.1a	Sept. 25	Bronze	Pistillate
James	111.7a	67.3a	4.9bc	5.4b	Sept. 13	Black	Pistillate
Creek	74.4bc	62.8ab	2.6ij	2.8j	Oct. 3	Black	Pistillate
Magnolia	82.3b	62.4ab	4.5cd	4.4d	Sept. 15	Bronze	Perfect
Roanoke	60.9bc	51.3bc	4.0def	4.4d	Sept. 11	Bronze	Perfect
Duplin	67.9bc	51.2bc	3.8efg	3.6f	Sept. 9	Black	Perfect
Thomas	55.9bcd	48.2c	3.5fgh	3.3fgh	Sept. 12	Black	Pistillate
Magoon	62.9bc	46.9c	3.3gh	3.1hij	Sept. 16	Black	Perfect
Albemarle	66.5bc	45.8cd	4.9bc	4.9c	Sept. 11	Black	Perfect
Hunt	57.7bc	43.9cd	4.0def	4.1de	Sept. 8	Black	Pistillate
Wallace	49.5cde	40.8cde	3.2ghi	3.5fg	Sept. 18	Bronze	Perfect
Scuppernong	54.5cd	39.2cde	4.2de	4.3de	Sept. 15	Bronze	Pistillate
Yuga	26.9e	38.6def	3.1hi	3.2ghi	Oct. 1	Bronze	Pistillate
Chowan	47.4 cde	32.4def	4.0def	4.2de	Sept. 9	Bronze	Perfect
Willard	30.3de	32.2def	4.0def	4.0e	Sept. 13	Bronze	Perfect
Tarheel	30.5de	28.1efg	2.2j	2.2k	Sept. 10	Black	Perfect
Topsail	49.4cde	27.0efg	5.2b	4.8c	Sept. 18	Bronze	Pistillate
Burgaw	27.4e	24.9fg	3.6e-h	3.4fgh	Sept. 12	Black	Perfect
Dearing	22.6e	23.0g	3.2ghi	2.9ij	Sept. 21	Bronze	Perfect
Pamlico	23.8e	18.1g	5.8a	5.4b	Sept. 15	Bronze	Perfect

[1]Means of 4 replications. Means within a column followed by the same letter are not significantly different.

Dr. Moore is horticulturist; Mr. Bowden was resident director of the Strawberry Substation, Bald Knob, when this work was conducted.

FORM GR-470-8 (REVERSE) 7700028 NEW REX

15. BOLLS:

[2] Locules: 1 = 3-4, 2 = 4-5

[3 8] NO. SEEDS PER BOLL

[3 7 0] LINT PERCENT

[3 5] MM. DIAMETER

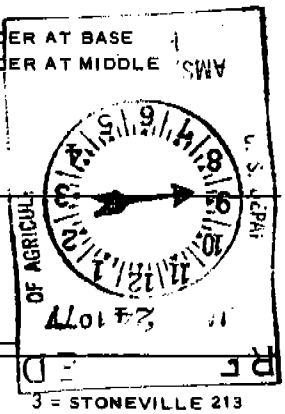
[1] Pitted: 1 = NONE, 2 = FINELY, 3 = COURSELY

[5 8 5] GRAMS SEED COTTON PER BOLL

[2] Breadth: 1 = BROADER AT BASE, 2 = BROADER AT MIDDLE

[3] Type: 1 = STORMPROOF (WESTBURN 70), 2 = STORM RESISTANT (LANKART 57), 3 = OPEN (DELTAPINE 16)

[3] Shape: 1 = LENGTH < WIDTH, 2 = LENGTH = WIDTH, 3 = LENGTH > WIDTH



16. BRACTEOLES:

[3] Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

[1] Teeth: 1 = FINE 2 = COURSE

[3] Teeth: 1 = 3-4 2 = 5-7 3 = 8-10 4 = OTHER (Specify) _____

17. YIELD: Compared to—

[0 5 0] PERCENT *LESS* THAN . . . . . [3]

[1 0 0] PERCENT *MORE* THAN . . . . . [1]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70
6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

[5 3] SPAN LENGTH 50%

[1 1 5] SPAN LENGTH 2.5%

[1 1 4] U.H.M. LENGTH

[0 5 6] MEAN LENGTH

[3 5] STAPLE LENGTH 32nd INCHES

[4 9] UNIFORMITY RATIO (MEAN/U.H.M.)

[4 6] UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

[8 8] 1,000 P.S.I.

[ ] ELONGATION E_1 8/4/77 99#

[ ] STILOMETER T_0

[4 5 6] MICRONAIRE READING

[1 0] YARN STRENGTH (Give test method) 1 yarn tenacity grs/tex 27 Tex

[ ] STILOMETER T_1

20. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1] VERTICILLIUM WILT

[1] FUSARIUM WILT

[1] ROOT KNOT NEMATODE

[2] BACTERIAL BLIGHT (Race 1)

[0] BACTERIAL BLIGHT (Race 2)

[0] ASCOCHYTA BLIGHT

[0] PHYMATOTRICHUM ROOT ROT

[0] RHIZOCTONIA

[0] ANTHRACNOSE

[0] RUST

[0] OTHER (Specify) _____

21. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1] BOLL WEEVIL

[1] APHID

[1] FLEAHOPPER

[0] LEAFWORM

[0] FALL ARMYWORM

[0] GRASSHOPPER

[1] LYGUS

[0] PINK BOLLWORM

[0] STINKBUG

[1] THRIP

[1] CUTWORM

[1] SPIDERMITE

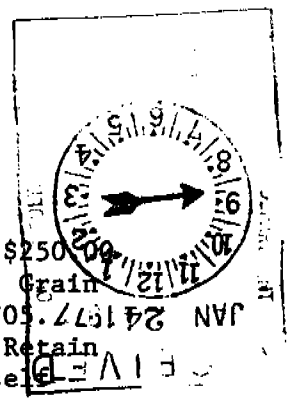
[ ] OTHER (Specify) _____

REFERENCES: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.

(2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.



INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give (1), the genealogy, including public and commerical varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.

14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)